

## SEQUENCE LISTING

<110> Takeda Chemical Industries, Ltd.

~~<120> MCH Receptor Antagonist~~

<130> Case2651

<150> JP 11-266278

<151> 1999-09-20

<150> JP 2000-221055

<151> 2000-07-17

<160> 16

<210> 1

<211> 32

<212> DNA

<213> Artificial Sequence

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<211> 32

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<213> Artificial Sequence

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<223>

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ACTAGTTCAG GTGCCTTTGC TTTCTGTCCT CT 32

<210> 3

<211> 353

<212> PRT

<213> Rat

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Ile	Ser	Asp	Gly	Gln	Asp	Asn	Leu	Thr	Leu	Pro	Gly	Ser	Pro	Pro	Arg
		20						25					30		
Thr	Gly	Ser	Val	Ser	Tyr	Ile	Asn	Ile	Ile	Met	Pro	Ser	Val	Phe	Gly
		35					40						45		
Thr	Ile	Cys	Leu	Leu	Gly	Ile	Val	Gly	Asn	Ser	Thr	Val	Ile	Phe	Ala
		50				55						60			
Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Ser	Asn	Val	Pro	Asp	Ile
65				70					75					80	
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met
			85						90					95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly
		100						105						110	
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe
		115					120						125		
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Thr	Ile	Asp	Arg	Tyr	Leu	Ala
		130					135						140		
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Met	Ala
145				150					155					160	
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr
			165						170					175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val
		180						185						190	
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe
		195					200						205		
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile
		210					215								220

Thr Ala Ala Tyr Val Lys Ile Leu Gln Arg Met Thr Ser Ser Val Ala  
225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg  
245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr  
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr  
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser  
290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys  
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Thr  
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly  
340 345 350

Thr

$\langle 210 \rangle$  4

<211> 1074

## <212> DNA

⟨213⟩ Rat

$\langle 400 \rangle$  4

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ATCAACATCA	TTATGCCTTC	CGTGTTTGGT	ACCATCTGTC	TCCTGGGCAT	CGTGGGAAAC	180
TCCACGGTCA	TCTTTGCTGT	GGTGAAGAAG	TCCAAGCTAC	ACTGGTGCAG	CAACGTCCCC	240
GACATCTTCA	TCATCAACCT	CTCTGTGGTG	GATCTGCTCT	TCCTGCTGGG	CATGCCTTTC	300
ATGATCCACC	AGCTCATGGG	GAACGGCGTC	TGGCACTTTG	GGGAAACCAT	GTGCACCCTC	360
ATCACAGCCA	TGGACGCCAA	CAGTCAGTTC	ACTAGCACCT	ACATCCTGAC	TGCCATGACC	420

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 ATGGCCACCC TGGTGATCTG CCTCCTGTGG GCGCTCTCCT TCATCAGTAT CACCCCTGTG 540  
 TGGCTCTACG CCAGGCTCAT TCCCTTCCCA GGGGGTGCTG TGGGCTGTGG CATCCGCCTG 600  
 CCAAACCCGG AACTGACCT CTACTGGTTC ACTCTGTACC AGTTTTTCCT GGCCTTTGCC 660  
 CTTCCGTTTG TGGTCATTAC CGCCGCATAC GTGAAAATAC TACAGCGCAT GACGTCTTCG 720  
 GTGGCCCCAG CCTCCCAACG CAGCATCCGG CTTCGGACAA AGAGGGTGAC CCGCACGGCC 780  
 ATTGCCATCT GTCTGGTCTT CTTTGTGTGC TGGGCACCCT ACTATGTGCT GCAGCTGACC 840  
 CAGCTGTCCA TCAGCCGCCC GACCCTCACG TTTGTCTACT TGTACAACGC GGCCATCAGC 900  
 TTGGGCTATG CTAACAGCTG CCTGAACCCC TTTGTGTACA TAGTGCTCTG TGAGACCTTT 960  
 CGAAAACGCT TGGTGTTGTC AGTGAAGCCT GCAGCCCAGG GGCAGCTCCG CACGGTCAGC 1020  
 AACGCTCAGA CAGCTGATGA GGAGAGGACA GAAAGCAAAG GCACCTGAAC TAGT 1074

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<211> 262

<212> RNA

<213> Rat

<400> 5

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 AUCAGCUGUC UGAGCGUUGC UGACCGUGCG GAGCUGCCCC UGGGCUGCAG GCUUCACUGA 180  
 CAACACCAAG CGUUUUCGAA AGGUCUCACA GAGCACUAUG UACACAAAGG GGUUCAGGCA 240  
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<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223>

<400> 6

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&lt;210&gt; 7

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt;

&lt;400&gt; 7

CCTGGTGATC TGCCTCCT 18

&lt;210&gt; 8

&lt;211&gt; 1275

&lt;212&gt; DNA

&lt;213&gt; Human

&lt;400&gt; 8

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 GGCAGCGGCT GCCAGGCTAC GGAGGAAGAC CCCCTTCCCA ACTGCGGGGC TTGCGCTCCG 120  
 GGACAAGGTG GCAGGCGCTG GAGGCTGCCG CAGCCTGCGT GGGTGGAGGG GAGCTCAGCT 180  
 CGGTTGTGGG AGCAGGCGAC CGGCACTGGC TGGATGGACC TGGAAGCCTC GCTGCTGCCC 240  
 ACTGGTCCCA ACGCCAGCAA CACCTCTGAT GGCCCCGATA ACCTCACTTC GGCAGGATCA 300  
 CCTCCTCGCA CGGGGAGCAT CTCCTACATC AACATCATCA TGCCTTCGGT GTTCGGCACC 360  
 ATCTGCCTCC TGGGCATCAT CGGGAAGTCC ACGGTCATCT TCGCGGTCGT GAAGAAGTCC 420  
 AAGCTGCACT GGTGCAACAA CGTCCCCGAC ATCTTCATCA TCAACCTCTC GGTAGTAGAT 480  
 CTCCTCTTTC TCCTGGGCAT GCCCTTCATG ATCCACCAGC TCATGGGCAA TGGGGTGTGG 540  
 CACTTTGGGG AGACCATGTG CACCCTCATC ACGGCCATGG ATGCCAATAG TCAGTTCACC 600  
 AGCACCTACA TCCTGACCGC CATGGCCATT GACCGCTACC TGGCCACTGT CCACCCCATC 660  
 TCTTCCACGA AGTTCCGGAA GCCCTCTGTG GCCACCCTGG TGATCTGCCT CCTGTGGGCC 720  
 CTCTCCTTCA TCAGCATCAC CCCTGTGTGG CTGTATGCCA GACTCATCCC CTTCCCAGGA 780  
 GGTGCACTGG GCTGCGGCAT ACGCCTGCCC AAGCCAGACA CTGACCTCTA CTGGTTCACC 840  
 CTGTACCAGT TTTTCCTGGC CTTTGCCCTG CCTTTTGTGG TCATCACAGC CGCATACGTG 900  
 AGGATCCTGC AGCGCATGAC GTCCTCAGTG GCCCCGCCT CCCAGCGCAG CATCCGGCTG 960

CGGACAAAGA GGGTGACCCG CACAGCCATC GCCATCTGTC TGGTCTTCTT TGTGTGCTGG 1020  
 GCACCCTACT ATGTGCTACA GCTGACCCAG TTGTCCATCA GCCGCCCCGAC CCTCACCTTT 1080  
 GTCTACTTAT ACAATGCGGC CATCAGCTTG GGCTATGCCA ACAGCTGCCT CAACCCCTTT 1140  
 GTGTACATCG TGCTCTGTGA GACGTTCCGC AAACGCTTGG TCCTGTCGGT GAAGCCTGCA 1200  
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<210> 9

<211> 422

<212> PRT

<213> Human

<400> 9

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				20				25					30		
Cys	Gly	Ala	Cys	Ala	Pro	Gly	Gln	Gly	Gly	Arg	Arg	Trp	Arg	Leu	Pro
		35					40					45			
Gln	Pro	Ala	Trp	Val	Glu	Gly	Ser	Ser	Ala	Arg	Leu	Trp	Glu	Gln	Ala
	50					55				60					
Thr	Gly	Thr	Gly	Trp	MeT	Asp	Leu	Glu	Ala	Ser	Leu	Leu	Pro	Thr	Gly
65				70					75				80		
Pro	Asn	Ala	Ser	Asn	Thr	Ser	Asp	Gly	Pro	Asp	Asn	Leu	Thr	Ser	Ala
			85					90				95			
Gly	Ser	Pro	Pro	Arg	Thr	Gly	Ser	Ile	Ser	Tyr	Ile	Asn	Ile	Ile	MeT
		100						105				110			
Pro	Ser	Val	Phe	Gly	Thr	Ile	Cys	Leu	Leu	Gly	Ile	Ile	Gly	Asn	Ser
		115						120				125			
Thr	Val	Ile	Phe	Ala	Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn
	130						135					140			

Asn Val Pro Asp Ile Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu			
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Phe Leu Leu Gly Met Pro Phe Met Ile His Gln Leu Met Gly Asn Gly			
	165	170	175
Val Trp His Phe Gly Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp			
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Ala Asn Ser Gln Phe Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile			
	195	200	205
Asp Arg Tyr Leu Ala Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg			
	210	215	220
Lys Pro Ser Val Ala Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser			
	225	230	235
Phe Ile Ser Ile Thr Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe			
	245	250	255
Pro Gly Gly Ala Val Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr			
	260	265	270
Asp Leu Tyr Trp Phe Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu			
	275	280	285
Pro Phe Val Val Ile Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met			
	290	295	300
Thr Ser Ser Val Ala Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr			
	305	310	315
Lys Arg Val Thr Arg Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val			
	325	330	335
Cys Trp Ala Pro Tyr Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser			
	340	345	350
Arg Pro Thr Leu Thr Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu			
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Gly Tyr Ala Asn Ser Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys			

370	375	380
Glu Thr Phe Arg Lys Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln		
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<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223>

<400> 10

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<210> 11

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223>

<400> 11

ACTAGTTCAG GTGCCTTTGC TTTCTGTCCT C 31

<210> 12

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223>



&lt;400&gt; 12

AGTCGACATG TCAGTGGGAG CCATGAAGAA GGG 33

&lt;210&gt; 13

&lt;211&gt; 33

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt;

&lt;400&gt; 13

AACTAGTTCA GGTGCCTTTG CTTTCTGTCC TCT 33

&lt;210&gt; 14

&lt;211&gt; 1074

&lt;212&gt; DNA

&lt;213&gt; Human

&lt;400&gt; 14

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 ATCAACATCA TCATGCCTTC GGTGTTCGGC ACCATCTGCC TCCTGGGCAT CATCGGGAAC 180  
 TCCACGGTCA TCTTCGCGGT CGTGAAGAAG TCCAAGCTGC ACTGGTGCAA CAACGTCCCC 240  
 GACATCTTCA TCATCAACCT CTCGGTAGTA GATCTCCTCT TTCTCCTGGG CATGCCCTTC 300  
 ATGATCCACC AGCTCATGGG CAATGGGGTG TGGCACTTTG GGGAGACCAT GTGCACCCTC 360  
 ATCACGGCCA TGGATGCCAA TAGTCAGTTC ACCAGCACCT ACATCCTGAC CGCCATGGCC 420  
 ATTGACCGCT ACCTGGCCAC TGTCCACCCC ATCTCTTCCA CGAAGTTCCG GAAGCCCTCT 480  
 GTGGCCACCC TGGTGATCTG CCTCCTGTGG GCCCTCTCCT TCATCAGCAT CACCCCTGTG 540  
 TGGCTGTATG CCAGACTCAT CCCCTTCCCA GGAGGTGCAG TGGGCTGCGG CATA CGCCTG 600  
 CCCAACCCAG AACTGACCT CTA CTGTTT ACCCTGTACC AGTTTTTCTT GGCCTTTGCC 660  
 CTGCCTTTTG TGGTCATCAC AGCCGCATAC GTGAGGATCC TGCAGCGCAT GACGTCTCTA 720  
 GTGGCCCCCG CCTCCCAGCG CAGCATCCGG CTGCGGACAA AGAGGGTGAC CCGCACAGCC 780  
 ATCGCCATCT GTCTGGTCTT CTTTGTGTGC TGGGCACCCT ACTATGTGCT ACAGCTGACC 840

CAGTTGTCCA TCAGCCGCCC GACCCTCACC TTTGTCTACT TATACAATGC GGCCATCAGC 900  
 TTGGGCTATG CCAACAGCTG CCTCAACCCC TTTGTGTACA TCGTGCTCTG TGAGACGTTT 960  
 CGCAAACGCT TGGTCCTGTC GGTGAAGCCT GCAGCCCAGG GGCAGCTTCG CGCTGTCAGC 1020  
 AACGCTCAGA CGGCTGACGA GGAGAGGACA GAAAGCAAAG GCACCTGAAC TAGT 1074

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<211> 1283

<212> DNA

<213> Human

<400> 15

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 GGGACAAGGT GGCAGGCGCT GGAGGCTGCC GCAGCCTGCG TGGGTGGAGG GGAGCTCAGC 180  
 TCGGTTGTGG GAGCAGGCGA CCGGCACTGG CTGGATGGAC CTGGAAGCCT CGCTGCTGCC 240  
 CACTGGTCCC AACGCCAGCA ACACCTCTGA TGGCCCCGAT AACCTCACTT CGGCAGGATC 300  
 ACCTCCTCGC ACGGGGAGCA TCTCCTACAT CAACATCATC ATGCCTTCGG TGTTCCGGCAC 360  
 CATCTGCCTC CTGGGCATCA TCGGGAATC CACGGTCATC TTCGCGGTCG TGAAGAAGTC 420  
 CAAGCTGCAC TGGTGCAACA ACGTCCCCGA CATCTTCATC ATCAACCTCT CGGTAGTAGA 480  
 TCTCCTCTTT CTCCTGGGCA TGCCCTTCAT GATCCACCAG CTCATGGGCA ATGGGGTGTG 540  
 GCACTTTGGG GAGACCATGT GCACCCTCAT CACGGCCATG GATGCCAATA GTCAGTTCAC 600  
 CAGCACCTAC ATCCTGACCG CCATGGCCAT TGACCGCTAC CTGGCCACTG TCCACCCCAT 660  
 CTCTTCCACG AAGTTCCGGA AGCCCTCTGT GGCCACCCTG GTGATCTGCC TCCTGTGGGC 720  
 CCTCTCCTTC ATCAGCATCA CCCCTGTGTG GCTGTATGCC AGACTCATCC CCTTCCCAGG 780  
 AGGTGCAGTG GGCTGCGGCA TACGCCTGCC CAACCCAGAC ACTGACCTCT ACTGGTTCAC 840  
 CCTGTACCAG TTTTTCCTGG CCTTTGCCCT GCCTTTTGTG GTCATCACAG CCGCATACGT 900  
 GAGGATCCTG CAGCGCATGA CGTCCTCAGT GGCCCCCGCC TCCCAGCGCA GCATCCGGCT 960  
 GCGGACAAAG AGGGTGACCC GCACAGCCAT CGCCATCTGT CTGGTCTTCT TTGTGTGCTG 1020  
 GGCACCCTAC TATGTGCTAC AGCTGACCCA GTTGTCCATC AGCCGCCCCGA CCCTCACCTT 1080  
 TGTCTACTTA TACAATGCGG CCATCAGCTT GGGCTATGCC AACAGCTGCC TCAACCCCTT 1140  
 TGTGTACATC GTGCTCTGTG AGACGTTCCG CAAACGCTTG GTCCTGTCGG TGAAGCCTGC 1200

AGCCCAGGGG CAGCTTCGCG CTGTCAGCAA CGCTCAGACG GCTGACGAGG AGAGGACAGA 1260

AAGCAAAGGC ACCTGAACTA GTT

1283

<210> 16

<211> 420

<212> RNA

<213> Human

<400> 16

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CUUUCUGUCC UCUCUCGUC AGCCGUCUGA GCGUUGCUGA CAGCGCGAAG CUGCCCCUGG 120

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ACAAAGGGGU UGAGGCAGCU GUUGGCAUAG CCCAAGCUGA UGGCCGCAUU GUAUAAGUAG 240

ACAAAGGUGA GGGUCGGGCG GCUGAUGGAC AACUGGGUCA GCUGUAGCAC AUAGUAGGGU 300

GCCCAGCACA CAAAGAAGAC CAGACAGAUG GCGAUGGCUG UGCGGGUCAC CCUCUUUGUC 360

CGCAGCCGGA UGCUGCGCUG GGAGGCGGGG GCCACUGAGG ACGUCAUGCG CUGCAGGAUC 420